

Staff Report for Proposed Ordinance P-25, Leaf Blower Restriction Ordinance

Executive Summary:

In an effort to help Maricopa County attain the National Ambient Air Quality Guidelines for particulate matter less than 10 microns (PM₁₀), the Arizona Legislature passed Senate Bill 1552 which includes a number of measures designed to reduce PM₁₀ emissions. One of these measures directed Maricopa County to adopt, implement and enforce an ordinance (by March 31, 2008) that restricts the use of leaf blowers (Arizona Revised Statutes (ARS) §11-877(A)(2)). In response to this legislation, the Maricopa County Department of Air Quality (MCAQD) has crafted ordinance P-25, Leaf Blower Restriction Ordinance. MCAQD held two public workshops (August 23, 2007 and September 20, 2007) to inform stakeholders of the pending ordinance and to allow for comment on the ordinance. The result of those workshops produced the ordinance that is pending and awaiting Board approval. The following sections describe the critical aspects and details of the proposed ordinance.

Legal Authority and Structure of Ordinance:

ARS §11-877(A)(B) clearly outlines the applicability and purpose of the ordinance. The ordinance applies to all areas within Area A that fall within Maricopa County borders. The ordinance has two purposes: (1) prohibit the blowing of landscape debris into public roadways; and (2) prohibit the operation of leaf blowers on any surface that is not stabilized. The ordinance applies to any person (public or private) operating a leaf blower, at any time. Sites that have been issued a permit for the control of fugitive dust have been exempted from this ordinance (ARS §11-877(B)), as the issued permit would regulate the proper use of leaf blowers at such sites.

Given the straightforward nature of the legislation as outlined above, MCAQD sought to faithful replicate these requirements in the proposed ordinance while including a civil penalty structure for violations of the ordinance. As such the ordinance is divided into four sections: (1) purpose and applicability; (2) definitions; (3) restrictions and violations; and (4) exemptions.

Public and Private Impact of Ordinance:

The ordinance is broad in scope as it applies to any person operating a leaf blower within the Maricopa County borders of Area A (most of the County east of 355th Ave). As such, individual private users (i.e., homeowners), landscaping companies, and public employees (i.e., County maintenance workers) are all subject to the provisions of the ordinance. The main impact of this broad provision will be to induce a change in the work practices of leaf blower operators. Operators will no longer be allowed to blow landscape debris into a street or use leaf blowers on an unstabilized surface, such as bare soil.

These ordinance requirements are anticipated to have limited to insignificant economic impacts for the leaf blower operator. Since the leaf blower ordinance is focused on changing work practices, the main cost to firms that utilize leaf blowers will be costs that are incurred through educating employees in the new practices. Similarly, individual users should have no economic impact beyond the increased time required to modify previous work practices.

Violators of the ordinance will incur economic impact through the civil penalty structure. The civil penalty structure included in the ordinance is designed to be similar to other existing MCAQD ordinances. A first violation of the ordinance results in a warning notice, while the second incurs a \$50 fine; the third a \$100 fine; and the fourth and subsequent violations result in a \$250 fine.

PM₁₀ Reductions and Health Impacts of the Ordinance:

MCAQD estimates that leaf blowers produce 843 tons of PM₁₀ annually in the PM₁₀ nonattainment area (MCAQD, 2007). This represents approximately one percent of all PM₁₀ emissions in the nonattainment area. The Leaf Blower Restriction Ordinance will reduce emissions in two ways: (1) by prohibiting the blowing of debris into public roadways, there is less material that can become “re-entrained” by vehicles driving over the debris, causing the debris to become airborne PM₁₀ emissions; and (2) by prohibiting the use of leaf blowers on unstabilized surfaces, there is less production of PM₁₀ emissions from these surfaces. Reductions of PM₁₀ emissions will help to improve public health, as recent literature shows that exposure to elevated PM₁₀ levels can cause increased occurrences of asthma and limit circulation functions (Lin et. al., 2002; Gent et. al., 2003).

Public Comment and Participation:

As mentioned earlier, MCAQD held two workshops (August 23, 2007 and September 20, 2007) to solicit stakeholder comments on the proposed ordinance. There were two main categories in which public comment and discussion were focused: (1) definitions; and (2) enforcement. In regards to definitions, MCAQD received the most comments regarding the definitions of “landscape debris” and “public roadway”. MCAQD strove to define landscape debris in a clear and comprehensive way, so that all debris associated with landscapes is captured by the definition. MCAQD believes the current definition (“Debris generated or accumulated as a result of, or moved in the course of, landscape operations. Landscape debris includes, but is not limited to, grass clippings, leaves, branches, vegetative matter, rubbish, soil and rock.”) accomplishes that purpose. MCAQD also received comments focused on the definition of a public roadway. In response, MCAQD adopted an established definition of a public roadway as

used in ARS §28-5201(11) to avoid as much confusion as possible as to whether a roadway is private or public.

With regards to enforcement MCAQD received two main comments. The first focused on who can legally enforce the ordinance. MCAQD has the authority to allow all types of County officers to enforce the ordinance; as such, MCAQD framed the wording about enforcement to read, “When the **Enforcement Officer** [instead of Control Officer, which just applies to MCAQD personnel] has reasonable cause to believe that any person has violated...” This makes it clear that both MCAQD inspection personnel and any other Maricopa County officer (i.e., sheriff deputy) can enforce the ordinance. Secondly, MCAQD received comments from industry and landscaping firms about who is classified as a “person” under the ordinance. MCAQD maintains the right to interpret “person” broadly (as is done in other MCAQD rules and ordinances) to mean both the individual operating the leaf blower and as well as the company for which that individual may be working. Thus, a violation of this ordinance can be issued to both an individual and the company that individual is working for or contracting services for.

After addressing these comments, MCAQD believes the ordinance is ready for approval and adoption by the Board of Supervisors.

References:

- Gent, J. F., Triche, E. W., Holford, T. R., Belanger, K., Bracken, M. B., et.al. (2003) Association of low-level ozone and fine particles with respiratory symptoms in children with asthma. *JAMA*, 290(14), 1859-1867.
- Lin, M., Chen, Y., Burnett, R. T., Villeneuve, P. J., & Krewski, D. (2002). The influence of ambient coarse particulate matter on asthma hospitalization in children: Case-crossover and time-series analyses. *Environmental health perspectives*, 110(6), 575-581.
- Maricopa County Air Quality Department (MCAQD). (2007). *2005 Periodic Emissions Inventory for PM₁₀ for the Maricopa County, Arizona, Nonattainment Area*

**MARICOPA COUNTY
P-25 LEAF BLOWER RESTRICTION ORDINANCE**

SECTION 1 - GENERAL

- A. PURPOSE
- B. APPLICABILITY

SECTION 2 - DEFINITIONS

- A. AREA A
- B. ENFORCEMENT OFFICER
- C. LANDSCAPE DEBRIS
- D. LEAF BLOWER
- E. PERMITS FOR THE CONTROL OF FUGITIVE DUST FROM DUST GENERATING OPERATIONS
- F. PERSON
- G. PUBLIC ROADWAY
- H. STABILIZED SURFACE

SECTION 3 - REQUIREMENTS

- A. RESTRICTED OPERATION OF A LEAF BLOWER
- B. VIOLATIONS, NOTICES AND PENALTIES

SECTION 4 - EXEMPTIONS

- A. SITES WITH PERMITS FOR THE CONTROL OF FUGITIVE DUST FROM DUST GENERATING OPERATIONS

FINAL DRAFT P-25 LEAF BLOWER RESTRICTION ORDINANCE – March 5, 2008

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Adopted xx/xx/08

**MARICOPA COUNTY
P-25 LEAF BLOWER RESTRICTION ORDINANCE**

SECTION 1 - GENERAL

- A. PURPOSE:** The Leaf Blower Restriction Ordinance prohibits the use of leaf blowers for the following activities:
1. Blowing of landscape debris into public roadways; and
 2. Operating leaf blowers on surfaces that have not been stabilized.
- B. APPLICABILITY:** The Leaf Blower Restriction Ordinance applies to the operation of leaf blowers in sections of Area A that are within Maricopa County, including those areas within incorporated cities and towns in such sections.

SECTION 2 - DEFINITIONS: For the purpose of this ordinance, the following definitions shall apply:

- A. AREA A –** As defined in Arizona Revised Statutes (ARS) §49-541(1), the area in Maricopa County delineated as follows:
- Township 8 North, Range 2 East and Range 3 East
Township 7 North, Range 2 West through Range 5 East
Township 6 North, Range 5 West through Range 6 East
Township 5 North, Range 5 West through Range 7 East
Township 4 North, Range 5 West through Range 8 East
Township 3 North, Range 5 West through Range 8 East
Township 2 North, Range 5 West through Range 8 East
Township 1 North, Range 5 West through Range 7 East
Township 1 South, Range 5 West through Range 7 East
Township 2 South, Range 5 West through Range 7 East
Township 3 South, Range 5 West through Range 1 East
Township 4 South, Range 5 West through Range 1 East
- B. ENFORCEMENT OFFICER –** Any officer of Maricopa County that has authority to enforce County rules, regulations and ordinances.
- C. LANDSCAPE DEBRIS –** Debris generated or accumulated as a result of, or moved in the course of, landscape operations. Landscape debris includes, but is not limited to, grass clippings, leaves, branches, vegetative matter, rubbish, soil and rock.
- D. LEAF BLOWER –** Any device that generates a stream of air that is designed, or used, to move landscape debris.

- E. PERMITS FOR THE CONTROL OF FUGITIVE DUST FROM DUST GENERATING OPERATIONS** – Any site that has been issued a permit by the Control Officer as required by Rule 200§305 of the Maricopa County Air Pollution Control Rules and Regulations.
- F. PERSON** – Any individual, public or private corporation, company, partnership, firm, association or society of persons, the Federal Government and any of its departments or agencies, or the State and any of its agencies, departments, or political subdivisions.
- G. PUBLIC ROADWAY** – Any street, alley, road, highway or thoroughfare of any kind that is used by the public or that is open to the public as a matter of right, including those roadways within gated communities, for the purpose of vehicular travel.
- H. STABILIZED SURFACE** – As defined in ARS §11-877(A)(3), stabilized surfaces are surfaces that have been treated with asphaltic concrete, cement concrete, hardscape, penetration treatment of bituminous material and seal coat of bituminous binder and a mineral aggregate, decomposed granite cover, crushed granite cover, aggregate cover, gravel cover, grass or other continuous vegetative cover, or any combination of these stabilizers.

SECTION 3 - REQUIREMENTS

A. RESTRICTED OPERATION OF A LEAF BLOWER:

1. A person shall not operate a leaf blower in a manner that causes landscape debris to be blown into a public roadway.
2. A person shall only operate leaf blowers on a stabilized surface.

B. VIOLATIONS, NOTICES, AND PENALTIES:

1. When the Enforcement Officer has reasonable cause to believe that any person has violated or is in violation of any provision of this ordinance, the Enforcement Officer shall issue, for the first violation of this ordinance, a warning notice stating which requirement of the ordinance was violated.
2. The Enforcement Officer may impose a civil penalty of \$50 for the second violation of this ordinance. Upon a third violation of this ordinance, the Enforcement Officer may impose a civil penalty of \$100. After the fourth and subsequent violations of this ordinance, the Enforcement Officer may impose a civil penalty of \$250.

SECTION 4 - EXEMPTIONS

- A. SITES WITH PERMITS FOR THE CONTROL OF FUGITIVE DUST FROM DUST GENERATING OPERATIONS:** Any site that has been issued a permit by the Control Officer for the control of fugitive dust from dust generating operations is exempt from all sections of this ordinance.

DRAFT NOTICE OF FINAL RULEMAKING
MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
P-26 RESIDENTIAL WOODBURNING RESTRICTION ORDINANCE

PREAMBLE

- 1. Sections affected**

	<u>Rulemaking action</u>
Residential Woodburing Restriction Ordinance	
Section 1	Amend
Section 2	Amend
Section 3	Amend
Section 4	Amend
- 2. Statutory authority for the rulemaking:**

Authorizing statute: A.R.S. § 11-871

Implementing Statute: A.R.S. § 49-501(F)
- 3. The effective date of the rule:**

Tentative Date of Adoption: February 20, 2008
- 4. List of all previous notices appearing in the register addressing the final rule:**

Notice of Rulemaking Docket Opening: 13 A.A.R. 2600, July 20, 2007.

Notice of Proposed Rulemaking: 13 A.A.R. 3701, November 2, 2007.
- 5. Name and address of department personnel with whom persons may communicate regarding the rulemaking:**

Name: Kathleen Sommer or Jo Crumbaker
Maricopa Air Quality Division

Address: 1001 N. Central Ave. Suite 595,
Phoenix, AZ 85004

Telephone: (602) 506-6706 or 602-506-6705

Fax: (602) 506-6179

E-Mail: kathleensommer@mail.maricopa.gov or jcrumbak@mail.maricopa.gov
- 6. Explanation of the rule, including the department's reason for initiating the rule:**

The Maricopa County Residential Woodburning Restriction Ordinance (RWBRO) is proposed to be revised as a result of the recently enacted Senate Bill 1552 which amends A.R.S. §§ 11-871(B), (D)(3),

and (D)(4) and 49-501(F). A.R.S. § 11-871 applies to residential woodburning in sections of Area A that are within Maricopa County when monitoring or forecasting indicates that the carbon monoxide (CO) standard or the particulate matter (PM) no-burn standard are likely to be exceeded.

A.R.S. § 49-501(F) authorizes the existing ordinance to include restrictions to open outdoor fires in chimineas, fire pits and other similar outdoor fires. These revisions directed in SB 1552 resulted from a review of residential woodburning programs in other parts of the country. The review concluded that increasing the penalties for burning and closing the loopholes in the existing residential woodburning program would result in additional particulate matter reductions. The review also concluded that changes to other elements of the residential woodburning program other than this curtailment program and the clean burning fireplace requirements for new construction would result in only de minimis incremental emission reductions. The increased penalty described in A.R.S. §11-871 (D)(3), (D)(4) increases the civil penalty for violations of this ordinance to \$250 for the fourth or any subsequent violation.

The PM_{2.5} no-burn action threshold was added to this Ordinance action level following observed recorded values of the 24-hour PM_{2.5} standard in excess of the National Ambient Air Quality Standard. The PM_{2.5} standard was violated in Phoenix during the 2006- 2007 Christmas and New Year holiday season purportedly due to residential woodburning and holiday traffic emissions. Maricopa County is currently in compliance with the PM_{2.5} standard and a change in designation to a non-attainment area for PM_{2.5} will require collecting ambient data for three years. The addition of the PM_{2.5} action level in this Ordinance will provide an early warning alert to ambient conditions and consequently can help prevent further exceedances of the PM_{2.5} standard. This change should assist the Phoenix area to avoid becoming designated as a non-attainment area for PM_{2.5} by the EPA.

Section by Section Explanation of Changes:

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|-------------------|--|
| Section 1 – A | This proposed amendment will include restrictions on additional burning devices: outdoor fire pits, wood burning chimineas, and similar outdoor fires when monitoring or forecasting indicates air quality standards will be violated. |
| Section 1 – B | This proposed amendment will restrict additional burning devices: outdoor fire pits, wood burning chimineas, and similar outdoor fires. |
| Section 2 - B(1) | This proposed amendment will update the definition of an approved device certified by the EPA Phase II Standards of Performance for Wood heaters in 40 Code of Federal Regulations (CFR) 60, Subpart AAA through July 1, 2006. |
| Section 2 – B (3) | This proposed amendment will add both indoor or outdoor woodburning fireplaces to the approved woodburning device definition as well as specify that they are designed to burn exclusively natural gas or propane. |

Section 2 - B(4)	This proposed amendment will update performance standards for any solid fuel burning device equivalent to the standards in 40 CFR 60, subpart AAA through July 1, 2006.
Section 2 - C	This proposed amendment will update the legal land description of Area A in the federal township-range format so that it coincides with the description of Area A found in Arizona Revised Statutes (ARS) §49-541(1).
Section 2 - D	This proposed amendment will require the additional woodburning devices: outdoor fire pits, wood burning chimineas, and similar outdoor fires to cease combustion within three hours after declaring a restricted-burn period.
Section 2 - G	This proposed amendment will correct the reference to asphalt products and will change the moisture content of inappropriate fuel.
Section 2 - I	This proposed amendment will add a definition of Outdoor Fire Pits.
Section 2 - J	The proposed amendment will add a definition of the ozone standard.
Section 2 - K	This proposed amendment will update the definition of the Particulate Matter No-Burn standard to include 24-hour concentrations for both PM ₁₀ and PM _{2.5} .
Section 2 - L	This proposed amendment will update the definition of the National Ambient Air Quality Standard for Particulate Matter to include both standards for PM ₁₀ and PM _{2.5} .
Section 2 – M	The proposed amendment will revise the definition of the Residential Woodburning Device.
Section 2 - O	This proposed amendment will add references to statutory authority regarding building codes.
Section 2 - P	This proposed amendment will add a definition of Woodburning Chiminea.
Section 3	This proposed amendment will rename Section 3 to ‘Standards’.
Section 3 - A	This proposed amendment will rename section 3(A) to “Unlawful Operation” and will expand the restricted burn period to the entire calendar year. This proposed amendment will also apply the restriction to additional woodburning devices: outdoor fire pits, wood burning chimineas, and similar outdoor fires.
Section 3- A(1) and A(2)	This proposed amendment will move the text of section 3(B) to sections 3(A)(1) and 3(A)(2). This proposed amendment will also redefine the restricted burn period time frames.
Section 3 - B(1) and B(2)	This proposed amendment will expand this restricted burn period to the entire calendar year.
Section 3 – (C)(1)	This proposed amendment will add the ozone standard to curtailment conditions.
Section 3 – C(2) and C(3)	This proposed amendment will add outdoor fire pits, wood burning chimineas, and similar outdoor fires to restricted burn period requirements.
Section 3 - D	This proposed amendment will change the Arizona Revised Statute reference to Violations, Notices, and Penalties to the new state statute sequencing system.

Section 3 - D(2)	This proposed amendment will impose a civil penalty of \$50 on any person who violates this ordinance for the second violation.
Section 3 - D(3)	This proposed amendment will impose a civil penalty of \$100 for the third violation and \$250 for the fourth or any subsequent violation. The proposed amendment will also allow the demonstration that smoke was not caused by any of the additional devices; outdoor fire pit, wood burning chiminea, or similar outdoor fires.
Section 4 - A	This proposed amendment will change the ordinance reference number for 'Sole Source of Heat' to match the amended ordinance sequencing system.
Section 4 - D(2)	This proposed amendment will change the ordinance reference number for 'Sole Source of Heat' to match the amended ordinance sequencing system.
Section 4 - D(4)	This proposed amendment will reference the exemption for an inadequate alternate source of heat to comply with all municipal or County Building Code requirements.

7. Demonstration of compliance with A.R.S.§49-112:

The revisions to this ordinance are required by changes to A.R.S. §11-871 and §49-501(F) contained in the recently enacted SB 1552. Therefore, a demonstration of compliance with A.R.S. §49-112 as required by the County's general grant of rulemaking and ordinance authority in A.R.S. §49-479 does not apply to this action.

8. Reference to any study relevant to the rule that the department reviewed and either relied on in its evaluation of or justification for the rule or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

Not applicable

9. Showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

10. Summary of the economic, small business, and consumer impact:

Implementation of these proposed amendments to the P-26 Residential Woodburning Restriction Ordinance will not incur a cost to the individual Maricopa County resident. The potential costs of these P-26 Ordinance amendments could result from additional duties added to the Maricopa County Air Quality Division implementation and enforcement program. Conversely, there are benefits to the residential community resulting from these ordinance amendments that result in both costs savings accrued to the public from the reduction in burdens on community health care and/or from the

reduction of potential physical health and welfare effects of individuals resulting from the emissions of Particulate Matter.

Costs and Benefits of P-26 Ordinance

After a review of historical data over the last three years (2004- 2006), forecasting determined the carbon monoxide (CO) standard or the particulate matter (PM) no-burn standard were exceeded an average of 12 episodes per year. Restricting residential wood burning on these twelve no-burn days results in a reduction of annual woodburning emissions in the non-attainment area by 7.15 percent. Assuming that 80 percent of the residents comply with the no-burn requirement, annual emissions from woodburning would be reduced by at least 5.72 percent. This results in an emission reduction of 0.11 metric tons/day during the no-burn episodes each year.

(2005 Periodic PM₁₀ Emission Inventory Maricopa County, AZ §3.2.6)

These emission estimates are derived from the latest available data on residential wood use for household heating in Maricopa County, from the US Department of Energy and are for the calendar year 2003. Since all fireplaces in homes constructed since 1999 are required by Arizona Statute to be clean-burning, it is assumed that new homes have negligible emissions. Thus, year 2003 data is assumed to be representative of 2005 emissions and of future emissions. (2005 Periodic PM₁₀ Emission Inventory Maricopa County, AZ § 3.2.6)

The emission reductions of PM reduce the physical health and welfare effects that accrue to the residential community. The adverse health effects result in a number of economic and social consequences, including:

1. Medical Costs: These include personal out-of-pocket expenses of the affected individual (or family), plus costs paid by insurance or Medicare, for example.
2. Work loss: This includes lost personal income, plus lost productivity whether the individual is compensated for the time or not. For example, some individuals may perceive no income loss because they receive sick pay, but sick pay is a cost of business and reflects lost productivity.
3. Increased costs for chores and care giving: These include special care giving and services that are not reflected in medical costs. These costs may occur because some health effects reduce the affected individual's ability to undertake some or all normal chores, and she or he may require care giving.
4. Other social and economic costs: These include restrictions on or reduced enjoyment of leisure activities, discomfort or inconvenience, pain and suffering, anxiety about the future, and concern and inconvenience to family members.

Health benefits accrue to the general public as a result of the enforcement of this Particulate Matter control measure. Health benefits can be expressed as avoided cases of PM related-health effects and

can be assigned a dollar value. (U.S. EPA, “The Benefits and Costs of the Clean Air Act 1990 to 2010,” Chapter 6, “Economic Valuation of Human Health Effects,”)

As mentioned above, Maricopa County Air Quality Division has an inspection and enforcement program in place to monitor for violations of residential woodburning during restricted burn days. The inspection program includes both regular inspections and responding to smoke emission complaints. The amendments to this P-26 Residential Woodburning Ordinance will not increase the current schedule of Maricopa County inspection, monitoring, record keeping or reporting but it does close the loopholes to the restrictions in the existing residential woodburning program that would have resulted in additional particulate matter reductions. The possibility of increased fines generated from the increased penalties in this proposed ordinance are not likely to impact or create additional County revenues because, to date, there are a limited number of consecutive third or fourth violations resulting in the fines.

This ordinance applies exclusively to the residential community so there are no direct costs to the business community or impacts on small business. Implementation will not incur a cost to residents in the nonattainment area or increase current costs of the existing Maricopa County Air Quality Department regular inspection program. Implementation of these proposed Ordinance Amendments will only benefit the residential community because of the reduction in burdens on community health care and associated reduction in costs for health care, as mentioned above.

11. Name and address of department personnel with whom persons may communicate regarding the rulemaking:

Name:	Kathleen Sommer or Jo Crumbaker, Maricopa County Air Quality Division
Address:	1001 N. Central Ave. Suite 595, Phoenix, Arizona 85004
Telephone:	(602) 506-6706 or (602) 506-6705
Fax:	(602) 506- 6179
E-Mail:	kathleensommer@mail.maricopa.gov or jcrumbak@mail.maricopa.gov

12. Description of the changes between the proposed rule, including supplemental notices and final rule:

No changes have been made between the proposed ordinance and the final draft ordinance.

13. A Summary of the comments made regarding the rule and the department response to them:

No comments were received during the formal comment period.

14. Any other matters prescribed by the statute that are applicable to the specific department or to any specific rule or class of rules:

No

15. Incorporations by reference and their location in the rule:

EPA Standards Of Performance For Wood Heaters in 40 Code Of Federal Regulations (CFR) 60, Subpart AAA as amended through July 1, 2006 is referenced in Section 2(B)(1).

16. Was this rule previously an emergency rule?

No

17. The full text of the rule follows:

**MARICOPA COUNTY
P-26 RESIDENTIAL WOODBURNING RESTRICTION ORDINANCE**

SECTION 1 - GENERAL

- A. PURPOSE
- B. APPLICABILITY

SECTION 2 - DEFINITIONS

- A. ADEQUATE SOURCE OF HEAT
- B. APPROVED WOODBURNING DEVICE
- C. AREA A
- D. BURN DOWN PERIOD
- E. CARBON MONOXIDE (CO) STANDARD
- F. CHIMNEY
- G. INAPPROPRIATE FUEL
- H. NONATTAINMENT AREA
- I. OUTDOOR FIRE PITS
- J. OZONE STANDARD
- ~~I. K.~~ PARTICULATE MATTER NO-BURN STANDARD- STANDARD
- ~~J. L.~~ PARTICULATE MATTER STANDARD
- ~~K. M.~~ RESIDENTIAL WOODBURNING DEVICE
- ~~L. N.~~ RESTRICTED-BURN PERIOD

~~M.O.~~ SOLE SOURCE OF HEAT

~~P.~~ WOOD BURNING CHIMINEA

SECTION 3 - ~~RESTRICTED-BURN PERIODS~~ STANDARDS

- A. RESTRICTED OPERATION OF ~~A~~ RESIDENTIAL WOODBURNING DEVICE
- ~~B.~~ UNLAWFUL OPERATION OF ~~A~~ RESIDENTIAL WOODBURNING DEVICE
- G. ~~B.~~ LAWFUL OPERATION OF SPECIFIED RESIDENTIAL WOODBURNING DEVICES
- ~~D.~~ ~~C.~~ DECLARATION OF A RESTRICTED-BURN PERIOD
- E. ~~D.~~ VIOLATIONS, NOTICES, AND PENALTIES

SECTION 4 - EXEMPTIONS

- A. RESIDENTIAL SOLE SOURCE OF HEAT EXEMPTION
- B. TEMPORARY SOLE SOURCE OF HEAT EXEMPTION
- C. EMERGENCY EXEMPTION
- D. INADEQUATE ALTERNATE SOURCE OF HEAT EXEMPTION
- E. APPLICATION FOR AN EXEMPTION
- F. ACTION ON AN EXEMPTION APPLICATION

Adopted 10/05/94
Revised 04/21/99
Revised 11/17/99

MARICOPA COUNTY

P-26

RESIDENTIAL WOODBURNING RESTRICTION ORDINANCE

SECTION 1 - GENERAL

- A. **PURPOSE:** The Residential Woodburning Restriction Ordinance restricts residential woodburning in a non-approved device, outdoor fire pits, wood burning chimineas, and similar outdoor fires when monitoring or forecasting indicates that ~~the~~ air quality ~~carbon monoxide (CO) standard~~

~~and/or the particulate matter no-burn standard~~ standards are likely to be exceeded.

- B. APPLICABILITY:** The Residential Woodburning Restriction Ordinance applies to any residential woodburning device, outdoor fire pits, wood burning chimineas, and similar outdoor fires in sections of Area A that are within Maricopa County or within incorporated cities and towns in such sections. The Residential Woodburning Restriction Ordinance does not apply to barbecue devices and mesquite grills.

SECTION 2 - DEFINITIONS: For the purpose of this ordinance, the following definitions shall apply:

- A. ADEQUATE SOURCE OF HEAT** - A permanently installed furnace or heating system, connected to or disconnected from its energy source, designed to heat utilizing oil, natural gas, electricity, or propane, and designed to maintain a minimum of 70° Fahrenheit at a point three feet above the floor in all normally inhabited areas of a residence.
- B. APPROVED WOODBURNING DEVICE** - The following residential devices shall be approved woodburning devices, even though such devices may burn a solid fuel other than wood:
1. A device that has been certified by the Environmental Protection Agency (EPA) as conforming to Phase II EPA Standards Of Performance For Wood Heaters in 40 Code Of Federal Regulations (CFR) 60, Subpart AAA as amended through ~~July 1, 1998~~ July 1, 2006.
 2. Any pellet stove.
 3. Any gas burning hearth appliances, including a dedicated gas logset permanently installed in any kind of indoor or outdoor woodburning fireplace which is designed to burn exclusively natural gas or propane.

4. Any masonry heater or any other solid fuel burning device that meets performance standards that are equivalent to the standards in 40 CFR 60, Subpart AAA as amended through July 1, 1998 July 1, 2006 , and that is approved by the Control Officer and the Administrator of EPA.

C. AREA A - As defined in Arizona Revised Statutes (ARS) §49-541(1), the area in Maricopa County delineated as follows:

Township 8 North, Range 2 East and Range 3 East
Township 7 North, Range 2 West through Range 5 East
Township 6 North, Range ~~2~~ 5 West through Range 6 East
Township 5 North, Range ~~2~~ 5 West through Range 7 East
Township 4 North, Range ~~2~~ 5 West through Range 8 East
Township 3 North, Range ~~2~~ 5 West through Range 8 East
Township 2 North, Range ~~2~~ 5 West through Range 8 East
Township 1 North, Range ~~2~~ 5 West through Range 7 East
Township 1 South, Range ~~2~~ 5 West through Range 7 East
Township 2 South, Range ~~2~~ 5 West through Range 7 East
Township 3 South, Range 5 West through Range 1 East
Township 4 South, Range 5 West through Range 1 East

- D. BURN DOWN PERIOD** - That period of time, not to exceed three hours after declaring a restricted-burn period, required for the cessation of combustion within any residential woodburning device, outdoor fire pit, similar outdoor fire or wood burning chiminea by withholding fuel or by modifying the air-to-fuel ratio.
- E. CARBON MONOXIDE (CO) STANDARD** - The maximum allowable eight-hour concentration that is nine parts of contaminant per million parts of air by volume (ppm).
- F. CHIMNEY** - A passage for smoke that is usually made of bricks, stone, or metal and often rises two feet above the roof of a building. An approved, factory-built chimney will have a label on each chimney connector and gas vent specifying that such chimney can be used for all fuels and will show the minimum safe clearances to combustibles.
- G. INAPPROPRIATE FUEL** - Includes, but is not limited to, leaves, grass clippings, green plants, refuse, paper, rubbish, books, magazines, fiberboard, packaging, rags, fabrics, animal waste, animal carcasses, coal, waste oil, liquid or gelatinous hydrocarbons, tar, ~~asphaltic~~ asphalt products, waste petroleum products, paints and solvents, chemically soaked wood, wood with a moisture content of greater than ~~30~~ 20 percent, treated wood, plastic or plastic products, rubber or rubber products, office records, sensitive or classified wastes, or any substance which normally emits dense smoke or obnoxious odors other than paper to start the fire or properly seasoned wood.

- H. NONATTAINMENT AREA** - An area so designated by the Administrator of the EPA, acting pursuant to Section 107 of the Clean Air Act, as exceeding national primary or secondary ambient air standards for a particular pollutant or pollutants.
- I. OUTDOOR FIRE PITS** - Any combustion of material outdoors, where solid fuels including wood or any other non-gaseous or non-liquid fuels are burned in the fuel bed, and the products of combustion are not directed through a flue or chimney.
- J. OZONE STANDARD** - The maximum allowable eight-hour concentration within a 24-hour period (midnight to midnight) that is 0.08 parts of contaminant per million parts of air by volume (ppm).
- ~~I.~~ K. PARTICULATE MATTER NO-BURN STANDARD** - If either of the following The maximum allowable 24-hour concentrations concentration that is forecast for particulate matter:
PM10 - 120 micrograms per cubic meter;
PM2.5 - 30 micrograms per cubic meter.
- ~~J.~~ L. PARTICULATE MATTER STANDARDS** - The maximum allowable 24-hour concentration that is:
PM10 - 150 micrograms per cubic meter or ;
PM2.5 - 35 micrograms per cubic meter.
- ~~K.~~ M. RESIDENTIAL WOODBURNING DEVICE** - A woodburning device designed for solid fuel combustion so that usable heat is derived for the interior of a residence. Residential woodburning devices do not include barbecue devices, fire pits, or mesquite grills. These devices can be used for aesthetic or space-heating purposes.
- ~~L.~~ N. RESTRICTED-BURN PERIOD** - A condition declared by the Control Officer whenever meteorological conditions are conducive to an accumulation of CO, ozone and/or particulate matter in exceedance of the standards or when air quality reaches other limits established by the Control Officer.
- M. O. SOLE SOURCE OF HEAT** - One or more residential woodburning devices which constitute the only source of heat in a residence and/or the sole source of fuel for cooking for a residence. No residential woodburning device shall be considered the sole source of heat if the residence is equipped with a permanently installed furnace or heating system which utilizes oil, natural gas, electricity, or propane and which is designed to heat the residence whether or not such furnace or heating system is connected to or disconnected from its energy source. However, this definition shall not supersede Municipal or County Building Code requirements as per authority of A.R.S. §§ 9-499.01, 9-240(B)(7), 9-276(A)(13)--(A)(15), A.R.S. § 9-801 et seq.

- P.** **WOOD BURNING CHIMINEA** – Chimineas are burning devices made from clay, aluminum, or steel and are used for warmth and aesthetics outside in yards and patios. Chimineas are designed to burn solid fuels.

SECTION 3 - RESTRICTED-BURN-PERIODS STANDARDS

- A.** **RESTRICTED UNLAWFUL OPERATION OF A RESIDENTIAL WOODBURNING DEVICE:** During a declared restricted-burn period from ~~October 1 through February 29~~, a person shall ~~be restricted from operating a residential woodburning device, not operate~~ the following devices in sections of Area A. ~~that are within Maricopa County or within incorporated cities and towns in such sections. Exemptions to this requirement are described in Section 3(C) (Lawful Operation of Specified Residential Woodburning Devices) of this ordinance.~~

B. **UNLAWFUL OPERATION OF A RESIDENTIAL WOODBURNING DEVICE:**

1. A Residential Woodburning Device shall not be operated when monitoring or forecasting indicates that the carbon monoxide (CO) standard and/or the particulate matter no-burn standard are likely to be exceeded:

~~1. a.~~ A person shall not operate a residential woodburning device Such that emissions to the atmosphere from the chimney, flue, or exhaust duct are visible during a restricted-burn period declared by the Control Officer.

~~2. b.~~ A person shall not operate a residential woodburning device Unless such device has been installed according to the instructions and restrictions specified by the manufacturer.

~~3. c.~~ A person shall not use a fuel in a residential woodburning device Except with those fuels that are recommended by the manufacturer.

~~4. d.~~ A person shall not burn inappropriate fuel in a residential woodburning device.

2. A Woodburning Chiminea, outdoor fire pit and similar outdoor fire shall not be operated with an inappropriate fuel when monitoring or forecasting indicates that the carbon monoxide (CO) or ozone standard (ARS §49-501(A)(2)) and/or the particulate matter no-burn standard are likely to be exceeded.

C.B. **LAWFUL OPERATION OF SPECIFIED RESIDENTIAL WOODBURNING DEVICES:**

1. During a declared restricted-burn period ~~from October 1 through February 29~~, a person may operate a residential woodburning

device if the Control Officer has issued an exemption for such device according to Section 4 of this ordinance and if no visible emissions to the atmosphere are produced after 20 consecutive minutes immediately following an ignition of or a refueling of such residential woodburning device.

2. During a declared restricted-burn period ~~from October 1 through February 29~~, a person may operate a residential woodburning device if such device meets the requirements of Maricopa County Air Pollution Control Regulations Rule 318 (Approval Of Residential Woodburning Devices) and if no visible emissions to the atmosphere are produced after 20 consecutive minutes immediately following an ignition of or a refueling of such residential woodburning device.

D. C. DECLARATION OF A RESTRICTED-BURN PERIOD:

1. The Control Officer shall declare a restricted-burn period if, after reviewing available meteorological data, atmospheric conditions, and ambient temperatures, the Control Officer determines that air pollution levels could exceed the carbon monoxide (CO) standard, the ozone standard, (ARS §49-501(A)(2)) and/or the particulate matter no-burn standard.
2. A person responsible for a residential woodburning device, outdoor fire pit, similar outdoor fire, or woodburning chiminea excluding those devices described in Section ~~3(G)~~ 3(B) of this ordinance, already in operation at the time a restricted-burn period is declared shall withhold new fuel from the residential woodburning device, outdoor fire pit, wood burning chiminea, or similar outdoor fire for the duration of the restricted-burn period.
3. Any person operating or in control of a residential woodburning device, outdoor fire pit, wood burning chiminea, or similar outdoor fire in sections of Area A that are within Maricopa County ~~and or~~ within incorporated cities and towns in such sections has a duty to know when a restricted-burn period has been declared.
4. Notice of a restricted-burn period shall be distributed over the wire service to electronic and print media and/or announced by a recorded telephone message at least three hours before initiating any enforcement action for a violation of this ordinance.

E. D. VIOLATIONS, NOTICES, AND PENALTIES: For purposes of this ordinance, and in accordance with ~~ARS §11-871(C)~~ ARS §11-871(D):

1. When the Control Officer has reasonable cause to believe that any person has violated or is in violation of any provision of this ordinance, the Control Officer shall issue, for the first violation of

this ordinance, a warning notice which includes a summary of the Maricopa County Residential Woodburning Restriction Ordinance and information on proper woodburning techniques.

2. The Control Officer may impose a civil penalty of \$50 to any person who violates this ordinance for the second violation ~~of this ordinance to any person who violates this ordinance~~ within a one year period after having been issued a warning notice for the first violation of this ordinance.
3. ~~In addition, For the third violation of this ordinance,~~ the Control Officer may impose a civil penalty of \$100 ~~for the third and subsequent violations of this ordinance.~~ The Control Officer may impose a civil penalty of \$250 for the fourth or any subsequent violation of this ordinance. After having been issued a citation for a violation of this ordinance, the violation may be refuted by demonstration that the smoke was not caused by a residential woodburning device, outdoor fire pit, wood burning chiminea, or similar outdoor fire or by proof of an exemption pursuant to Section 4 of this ordinance.
- ~~3.~~ 4. Only those violations of this ordinance which have occurred within one year of a present offense shall be considered as prior violations. No person shall be cited for a violation of this ordinance more than once in any calendar day. Each day of violation constitutes a separate offense.

SECTION 4 - EXEMPTIONS

- A. **RESIDENTIAL SOLE SOURCE OF HEAT EXEMPTION:** The Control Officer may grant a residential sole source of heat exemption if the Control Officer determines that a residential woodburning device meets the criteria of sole source of heat as described in ~~Section 2(M)~~ Section 2(O) of this ordinance. The recipient of a residential sole source of heat exemption must apply annually to the Control Officer for renewal of such exemption, if such exemption is still necessary. The Control Officer shall not issue a residential sole source of heat exemption after December 31, 1995. However, the Control Officer may renew a residential sole source of heat exemption if such exemption was issued before December 31, 1995 and if the residential woodburning device meets the criteria of sole source of heat as described in ~~Section 2(M)~~ Section 2(O) of this ordinance.
- B. **TEMPORARY SOLE SOURCE OF HEAT EXEMPTION:** The Control Officer may issue a temporary sole source of heat exemption for economic or health reasons if the Control Officer determines that the applicant qualifies for financial assistance, according to the economic guidelines established under the Food Stamps, Medicaid, or low income energy assistance programs, as administered by the Income Support Division, or if the Control Officer determines that failure to grant a temporary sole source of heat exemption would endanger the health of

the applicant. A temporary sole source of heat exemption shall not be issued for more than 150 days.

- C. EMERGENCY EXEMPTION:** The Control Officer may issue an emergency exemption if the Control Officer determines that an emergency situation exists. An emergency exemption shall be valid for a period determined by the Control Officer, but shall not exceed one year from the date it is issued. An emergency situation shall include, but is not limited to, the following:

1. A situation where a person demonstrates that his heating system, other than a residential woodburning device, is inoperable for reasons other than his own actions; or
2. A situation where a person demonstrates that his heating system has been involuntarily disconnected by a utility company or other fuel supplier.

- D. INADEQUATE ALTERNATE SOURCE OF HEAT EXEMPTION:** The Control Officer may issue an inadequate alternate source of heat exemption if the Control Officer determines:

1. That there is a heat source other than a residential woodburning device available to the residence;
2. That such heat source is not a sole source of heat, as defined in ~~Section 2(L)~~ Section 2(O) of this ordinance, and that such heat source is used in conjunction with a residential woodburning device;
3. That such heat source is not an approved woodburning device, as defined in Maricopa County Air Pollution Control Regulations Rule 318 (Approval Of Residential Woodburning Devices); and
4. That such heat source is not an adequate source of heat, as defined in Section 2(A) of this ordinance.

The recipient of an inadequate alternate source of heat exemption must comply with all municipal or County Building Code requirements (as per authority of A.R.S. §§ 9-499.01, 9-240(B)(7), 9-276(A)(13)--(A)(15), A.R.S. § 9-801 et seq.) and must apply annually to the Control Officer for renewal of such exemption, if such exemption is still necessary. The Control Officer shall not issue an inadequate alternate source of heat exemption after December 31, 1995. However, the Control Officer may renew an inadequate alternate source of heat exemption, if such exemption was issued before December 31, 1995 and if the residential woodburning device meets the criteria of this ordinance.

- E. APPLICATION FOR AN EXEMPTION:** Any person seeking an exemption shall do so by submitting an acceptable written application to the Control Officer. An application shall state:

1. The applicant's name and mailing address;
2. The address for which the exemption is sought; and
3. The reasons for seeking the exemption.

F. ACTION ON AN EXEMPTION APPLICATION: Following the receipt of an exemption application, the Control Officer shall either grant the exemption, grant the exemption subject to conditions, or deny the exemption. The Control Officer shall notify, in writing, the applicant of such decision.

DRAFT NOTICE OF FINAL RULEMAKING
MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
P-27 VEHICLE PARKING AND USE ON UNSTABILIZED VACANT LOTS

PREAMBLE

1. Sections affected

P-27 Vehicle Parking And Use On Unstabilized Vacant Lots

Rulemaking action

New

2. Statutory authority for the rulemaking:

Authorizing statute: A.R.S. § 49-474.01(A) (7)

Implementing Statute A.R.S. § 11-251.05

3. The effective date of the rule:

Tentative Date of Adoption: February 20, 2008

4. List of all previous notices appearing in the register addressing the final rule:

Notice of Rulemaking Docket Opening: 13 A.A.R 3375, October 5, 2007.

Notice of Proposed Rulemaking: 13 A.A.R. 3701, November 2, 2007.

5. Name and address of department personnel with whom persons may communicate regarding the rulemaking:

Name: Kathleen Sommer or Jo Crumbaker

Maricopa County Air Quality Department

Address: 1001 North Central Avenue, Suite 595

Phoenix, AZ 85004

Telephone: (602) 506-6706 or 602-506-6705

Fax: 602) 506-6179

E-Mail: kathleensommer@mail.maricopa.gov or jcrumbak@mail.maricopa.gov

6. Explanation of the rule, including the department's reason for initiating the rule:

In an effort to help Maricopa County attain the National Ambient Air Quality Standards for particulate matter less than 10 microns (PM₁₀), the Arizona Legislature recently enacted Senate Bill 1552 which provides measures committed to reduce PM₁₀ emissions. One of these measures prohibits vehicle parking and use on unstabilized vacant lots (A.R.S. §§ 9-500.27(A), and 49-474.01(A)(7)).

Responding to this commitment, Maricopa County Air Quality Department prepared ordinance P-27 which will restrict vehicle parking and use on unstabilized vacant lots and imposes a penalty to the

vehicle operator for violations. The penalty consists of a Class 3 misdemeanor and requires the vehicle operator to attend at least eight but not more than twenty-four hours of a community restitution course related to the off-highway operations of motor vehicles.

The measures in this ordinance will help reduce PM₁₀ emissions which are required for this region to implement a Five Percent Plan for PM₁₀. Since the region did not attain the PM₁₀ standard by December 31, 2006, this region must submit to the Environmental Protection Agency (EPA) a Five Percent Plan for PM₁₀ by December 31, 2007. The Five Percent Plan for PM₁₀ must demonstrate 5% reductions per year in emissions from the date of submission to the EPA.

Section By Section Explanation Of The Proposed Ordinance:

SECTION 1 - GENERAL

- Section 1 - A Includes proposed purpose and restrictions which apply to all vehicle parking and use on unstabilized vacant lots.
- Section 1 - B Includes applicability of the proposed ordinance which applies to parking and use in the unincorporated sections of Area A that are within Maricopa County.

SECTION 2 - DEFINITIONS

- Section 2 - A Includes proposed ordinance definition of the legal land description of Area A in the federal township-range format so that it coincides with the description of Area A found in Arizona Revised Statutes (ARS) §49-541(1).
- Section 2 - B Includes proposed ordinance definition of a designated or opened trail system which is designated or opened by a government land management agency.
- Section 2 - C Includes proposed ordinance definition of a road or highway which is maintained by a municipality and open for public use for purposes of vehicular travel and, for purposes of this ordinance, the definition includes designated or opened trail systems and surface roads regardless of surface composition.
- Section 2 - D Includes proposed ordinance definition of vacant lots which coincides with vacant lot definition found in another Maricopa County rule - Rule 310.01 - which defines land that is undeveloped, without a structure, partially developed, or not a road or highway.
- Section 2 - E Includes proposed ordinance definition of a vehicle as a self propelled device excluding devices moved by human power or used on tracks.

SECTION 3 - REQUIREMENTS

- Section 3-A Includes proposed ordinance restrictions for vehicle parking and use on unstabilized vacant lots.

Section 4 - VIOLATIONS, NOTICES, AND PENALTIES

- Section 4 - A Includes proposed penalty of class 3 misdemeanor for violation of ordinance.

Section 4 - B Includes proposed penalty for violation, in addition to or in lieu of a fine, an order to perform at least eight but not more than twenty-four hours of a community restitution course related to the off-highway operation of motor vehicles.

Section 4 - C Includes, for violations of this ordinance, proposed use of a uniform traffic ticket and complaint prescribed by the rules of procedure in civil traffic cases adopted by the Supreme Court.

Section 5 - EXEMPTIONS

Section 5 - A Includes proposed exemption for the property owner if the exemption does not violate any other applicable laws.

Section 5 - B Includes proposed exemption for a site with a permit issued by the Control Officer for the control of fugitive dust from dust generating operations.

7. Demonstration of compliance with A.R.S. §49-112:

Under ARS §49-479(C), a county may not adopt a rule or ordinance that is more stringent than the rules adopted by the Director of the Arizona Department of Environmental Quality (ADEQ) for similar sources unless it demonstrates compliance with the requirements of ARS §49-112.

ARS §49-112 (A)

When authorized by law, a county may adopt a rule, ordinance, or other regulation that is more stringent than or in addition to a provision of this title or rule adopted by the director or any board or commission authorized to adopt rules pursuant to this title if all the following conditions are met:

1. The rule, ordinance or other regulation is necessary to address a peculiar local condition;
2. There is credible evidence that the rule, ordinance or other regulation is either:
 - (a) Necessary to prevent a significant threat to public health or the environment that results from a peculiar local condition and is technically and economically feasible
 - (b) Required under a federal statute or regulation, or authorized pursuant to an intergovernmental agreement with the federal government to enforce federal statutes or regulations if the county rule, ordinance or other regulation is equivalent to federal statutes or regulations.

The proposed Maricopa County Ordinance - P-27 - is mandated for adoption under Arizona Revised Statutes §49-474.01(A)(7) and the recently enacted in Senate Bill 1552. Therefore, a demonstration of compliance with ARS §49-112 as required by the County's general grant of rulemaking and ordinance authority in ARS §49-479 does not apply to this action.

8. Reference to any study relevant to the rule that the department reviewed and either relied on in its evaluation of or justification for the rule or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

Not applicable

9. Showing of good cause why the rule is necessary to promote a statewide interest if the rule will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

10. Summary of the economic, small business, and consumer impact:

This proposed ordinance provides a disincentive to the operators of vehicles to trespass on vacant lots that are unstabilized and saves property owners from spending money to repair damage to their property from vehicle activity. Secondly, the measures in this proposed ordinance helps to obtain the air quality benefits and consequent health benefits for the community from the lower emissions of Particulate Matter. The section will look at:

- Emission reductions of particulate matter from this proposed ordinance implementation; and
- Identification of the costs and potential physical health, welfare benefits.

a. Emission Reductions

Fugitive dust particulate emissions from vehicles operating on unpaved areas were estimated by Maricopa Association of Governments (MAG) based on the acres of disturbed land devoted to unpaved parking areas. The specific methodology, calculations, and assumptions for each component of the emissions calculation for vehicular use and parking on vacant lots is described in the Maricopa County 2005 Periodic PM₁₀ Emission Inventory for the Maricopa County Non-attainment Area- Section 3.5.9. Factors used to calculate emission rates for unpaved parking areas are EPA's AP-42 emission rates and GIS applications to the 2004 MAG land use data of the total acres of vacant land in the Maricopa county portion of the PM₁₀ non-attainment area. The results for the PM₁₀ non-attainment areas and Maricopa County are summarized in tons per year.

According to the Maricopa County 2005 Periodic PM₁₀ Emission Inventory (§ 3.5.9) The Maricopa County Nonattainment Area emissions from vehicles traveling in unpaved parking areas are as follows:

PM₁₀ NAA=3009 tons/yr annual emissions
PM₁₀ NAA=16,490 lbs/day daily emissions

There are two sources of PM₁₀ emissions from vacant lots:

1. Trespass trips from the vehicle;
2. Windblown emissions from the disturbed area on the lot.

Emissions from two weekly trips by light-duty vehicles are estimated to produce 11.6 pounds of PM₁₀ per year on a 3 acre lot. By eliminating trespass trips, the emission reduction achieved by this measure would be 11.6 pounds of PM₁₀ per year per average vacant lot. Windblown emissions are estimated to be 75.8 pounds per year for a lot where the disturbed area is limited to a single 20-foot wide track across the lot. By eliminating trespass trips, the emission reduction achieved by

this ordinance would be 87.4 pounds of PM₁₀ per year per average vacant lot. (MAG, Analysis of Particulate Control Measures; Cost Effectiveness, April 18, 2007)

There are over 4,000 vacant lots in the Maricopa County PM₁₀ nonattainment area which translates to a reduction of 174 tons of PM₁₀ per year or a 5.8% reduction of the total non-attainment area PM₁₀ emissions obtained from eliminating vehicle parking and use on vacant lots. (2005 Periodic PM₁₀ Emission Inventory Maricopa County, AZ §3.2.6)

b. Costs and Health Benefits

Minimum costs to restrict the vehicle owners from trespassing on vacant lots were determined from a review published in the Salt River PM₁₀ State Implementation Plan (SIP) prepared by Arizona Department of Environmental Quality (ADEQ). After study it was determined that the installation of a rock barrier would be the least expensive method of prohibiting vehicle parking and use on vacant lots. The cost of installing a rock boulder barrier was estimated to be \$1,342 per year per lot, based on a survey conducted by ADEQ in support of the Salt River SIP. There are over 4,000 vacant lots in the Maricopa County PM₁₀ nonattainment area. The rock barrier for each lot is assumed to completely eliminate trespass emissions on a vacant lots at potential cost to lot owners of \$5,368,000.

Community health benefits result from the implementation of this proposed P-27 Ordinance when ambient emissions of Particulate Matter are reduced. The emission reductions of PM reduce the physical health and welfare effects and result in a number of economic and social consequences, including:

1. Medical Costs: These include personal out-of-pocket expenses of the affected individual (or family), plus costs paid by insurance or Medicare, for example.
2. Work loss: This includes lost personal income, plus lost productivity whether the individual is compensated for the time or not. For example, some individuals may perceive no income loss because they receive sick pay, but sick pay is a cost of business and reflects lost productivity.
3. Increased costs for chores and care giving: These include special care giving and services that are not reflected in medical costs. These costs may occur because some health effects reduce the affected individual's ability to undertake some or all normal chores, and she or he may require care giving.
4. Other social and economic costs: These include restrictions on or reduced enjoyment of leisure activities, discomfort or inconvenience, pain and suffering, anxiety about the future, and concern and inconvenience to family members.

Health benefits accrue to the general public as a result of the enforcement of this Particulate Matter control measure. Health benefits can be expressed as avoided cases of PM related-health effects and assigned a dollar value.

Summary

There are over 4,000 vacant lots in the Maricopa County PM₁₀ nonattainment area which translates to a reduction of 174 tons of PM₁₀ each year from the P-28 Ordinance measures. This is 5.8% of the total non-attainment area PM₁₀ emissions reduced from eliminating vehicle parking and use on vacant lots. (2005 Periodic PM₁₀ Emission Inventory Maricopa County, AZ §3.2.6) A good portion of the dollar savings and benefits observed from the proposed P-28 ordinance measures is from health benefits which can be expressed as avoided cases of PM related-health effects and the associated costs of care. (U.S. EPA, “The Benefits and Costs of the Clean Air Act 1990 to 2010,” Chapter 6, “Economic Valuation of Human Health Effects,”)

This proposed P-27 ordinance could increase monitoring, record keeping or reporting burdens with a projected increase in the existing Maricopa County Air Quality inspection program. These additional inspection and judicial costs will be offset by the considerable reduction in burdens on community health care, as described above. This decreased burden of community health care helps offset increased agency costs and can also be expressed as avoided cases of PM related-health effects. The 5.8% PM₁₀ emission reduction resulting from the implementation of this proposed Ordinance equates to millions of dollars per year cost savings from community health benefits from the lower emissions of Particulate Matter.

11. Name and address of department personnel with whom persons may communicate regarding the rulemaking:

Name:	Kathleen Sommer or Jo Crumbaker, Maricopa County Air Quality Division
Address:	1001 N. Central Ave. Suite 595, Phoenix, Arizona 85004
Telephone:	(602) 506-6706 or (602) 506-6705
Fax:	(602) 506- 6179
E-Mail:	kathleensommer@mail.maricopa.gov or jcrumbak@mail.maricopa.gov

12. Description of the changes between the proposed rule, including supplemental notices and final rule:

Section 2(C): Added to the definition of road or highway “any other property dedicated or otherwise reserved for public or private street uses, as evidenced by a recorded document, or having thereon a

public easement for such use”. The definition of road or highway now reads: “The entire width between the boundary lines of every way publicly maintained by the federal government, a city, a town or a county if any part of the way is generally open to the use of the public for purposes of vehicular travel. For purposes of this ordinance, the term “road or highway” also includes designated or opened trail systems, service roads regardless of surface composition, and any other property dedicated or otherwise reserved for public or private street uses, as evidenced by a recorded document, or having thereon a public easement for such use.”

13. Summary of the comments made regarding the rule and the department response to them:

No formal comments were received

14. Any other matters prescribed by the statute that are applicable to the specific department or to any specific rule or class of rules:

Not applicable

15. Incorporations by reference and their location in the rule:

None

16. Was this rule previously an emergency rule?

No

17. The full text of the rule follows:

**MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
P-27
VEHICLE PARKING AND USE ON UNSTABILIZED VACANT LOTS**

SECTION 1 - GENERAL

- A. PURPOSE
- B. APPLICABILITY

SECTION 2 - DEFINITIONS

- A. AREA A
- B. DESIGNATED OR OPENED TRAIL SYSTEM
- C. ROAD OR HIGHWAY
- D. VACANT LOTS
- E. VEHICLE

SECTION 3 - REQUIREMENTS

- A. RESTRICTED VEHICLE PARKING AND USE

SECTION 4 - VIOLATIONS, NOTICES, AND PENALTIES

SECTION 5 - EXEMPTIONS

MARICOPA COUNTY AIR POLLUTION CONTROL REGULATIONS
P-27
VEHICLE PARKING AND USE ON UNSTABILIZED VACANT LOTS

SECTION 1 - GENERAL

- A. PURPOSE:** This Ordinance restricts all vehicle parking and use on unstabilized vacant lots.
- B. APPLICABILITY:** This Ordinance applies to vehicle parking and use in the unincorporated sections of Area A that are within Maricopa County.

SECTION 2 - DEFINITIONS: For the purpose of this Ordinance, the following definitions shall apply:

- A. AREA A** - The part of the greater Phoenix metropolitan area where specific pollution control programs are in place for ozone, carbon monoxide, and particulate matter. As defined in Arizona Revised Statutes (ARS) §49-541(1), the area in Maricopa County delineated as follows:
Township 8 North, Range 2 East and Range 3 East
Township 7 North, Range 2 West through Range 5 East
Township 6 North, Range 5 West through Range 6 East
Township 5 North, Range 5 West through Range 7 East
Township 4 North, Range 5 West through Range 8 East
Township 3 North, Range 5 West through Range 8 East
Township 2 North, Range 5 West through Range 8 East
Township 1 North, Range 5 West through Range 7 East
Township 1 South, Range 5 West through Range 7 East
Township 2 South, Range 5 West through Range 7 East
Township 3 South, Range 5 West through Range 1 East
Township 4 South, Range 5 West through Range 1 East
- B. DESIGNATED OR OPENED TRAIL SYSTEM** - Roads or routes that are part of a system of trails and that are designated or opened by a government land management agency by order, sign, and/or map approved by such agency.
- C. ROAD OR HIGHWAY** - The entire width between the boundary lines of every way publicly maintained by the federal government, a city, a town or a county if any part of the way is generally open to the use of the public for purposes of vehicular travel. For purposes of this ordinance, the term “road or highway” also includes designated or opened trail systems and service roads regardless of surface composition, and any other property dedicated or otherwise reserved for public or private street uses, as evidenced by a recorded document, or having thereon a public easement for such use.
- D. VACANT LOTS** - Any of the following described in Section 2(D)(1) through Section 2(D)(4) of this ordinance:
1. An unsubdivided or undeveloped tract of land.
 2. A subdivided residential, industrial, institutional, governmental, or commercial lot that contains no approved or permitted buildings, structures, or uses of a temporary or permanent nature.
 3. A partially developed residential, industrial, institutional, governmental, or commercial lot.
 4. For the purposes of this ordinance, a vacant lot is not a road or highway.

- E. VEHICLE** - A self propelled device and its appurtenances, excluding devices moved by human power or used exclusively on stationary rails or tracks.

SECTION 3 - REQUIREMENTS

- A. RESTRICTED VEHICLE PARKING AND USE:** A person shall not park or use a vehicle on an unstabilized vacant lot within the unincorporated sections of Area A in Maricopa County.

SECTION 4 - VIOLATIONS, NOTICES, AND PENALTIES

- A.** A person who violates this Ordinance is guilty of a class 3 misdemeanor.
- B.** In addition to or in lieu of a fine pursuant to this section, a judge may order the person to perform at least eight but not more than twenty-four hours of a community restitution course related to the off-highway operation of motor vehicles.
- C.** For violations of this Ordinance, the Enforcement Officer shall use a uniform traffic ticket and complaint prescribed by the rules of procedure in civil traffic cases adopted by the Supreme Court. The Enforcement Officer may issue a citation to persons in violation of this Ordinance.

SECTION 5 - EXEMPTIONS

- A.** The property owner, person entitled to immediate possession of the property, or invitee who has lawful authority may operate such vehicles if such use does not violate any other applicable laws.
- B.** Any site that has been issued a permit by the Control Officer for the control of fugitive dust from dust generating operations.

**Staff Report
For Proposed Ordinance
P-28 - Off-Road Vehicle Use In Unincorporated Areas Of Maricopa County**

Executive Summary:

The Phoenix nonattainment area did not meet the PM₁₀ standard by December 31, 2006, so this region must submit to the Environmental Protection Agency (EPA) a Five Percent Plan for PM₁₀ by December 31, 2007. The Five Percent Plan for PM₁₀ must demonstrate a 5% reduction per year in emissions from the date of submission to the EPA. In response to this commitment, the Arizona Legislature recently enacted Senate Bill 1552 which authorizes measures committed to reduce PM₁₀ emissions. One of the measures is to prohibit the operation any vehicles on unpaved public or private property. Responding to this commitment, proposed P-28 restricts the operation of any vehicle on unpaved property and imposes a penalty to the vehicle operator for violations. A violation of this ordinance is classified as a Class 3 misdemeanor and mandates the vehicle operator to attend at least eight but not more than 24-hours of a community restitution course related to the off-highway operation of motor vehicles.

To inform stakeholders of the pending ordinance and to allow for comments, the Maricopa County Air Quality Department (MCAQD) held three public workshops (August 27, 2007, September 26, 2007, and October 18, 2007). The compromises reached from these workshops are incorporated into this proposed ordinance, which is pending and awaiting Board approval. The following sections describe the critical aspects and details of the proposed ordinance.

Legal Authority And Structure Of Ordinance:

The proposed P-28 ordinance is authorized by A.R.S. § 9-500.27(A), A.R.S. § 11-251(43), and A.R.S. § 49-457. The purpose of proposed P-28 is not to supersede or overlap the existing Maricopa County fugitive dust rules (Rules 310 and 310.01); rather it closes the compliance loopholes in these rules. Both the proposed P-28 ordinance and the Maricopa County fugitive dust rules (Rules 310 and 310.01) fulfill the mandatory emissions curtailment elements as required by the passage of Senate Bill 1552 and commitments made in the Five Percent Plan for PM₁₀ as required for EPA. As mandated by the statutes listed above, the proposed P-28 ordinance applies to all unincorporated areas within Maricopa County. The proposed ordinance

applies to any person operating a vehicle at any time on both public and private unpaved property. In the past, Maricopa County rules applied only to the property owners who had sole responsibility to keep vehicles off unpaved open areas and vacant lots. The proposed ordinance requires that vehicle operators, in addition to the land owners, take responsibility for operation and use of vehicles on unpaved property.

The proposed P-28 ordinance imposes a penalty directly to the vehicle operator for violations. The proposed ordinance is divided into five sections: (1) purpose and applicability; (2) definitions; (3) restrictions; (4) violations, notices, and penalties; and (5) exemptions.

Public And Private Impact Of Ordinance:

The proposed ordinance is broad in scope as it applies to any person operating a vehicle within the unincorporated areas of Maricopa County. The proposed ordinance will limit the emission of particulate matter (PM₁₀) into the ambient air from vehicle use and operations on unpaved public property or unpaved private property. There are two major impacts of this ordinance. First, the individual vehicle operator is responsible in addition to the land owner for vehicle use on unpaved property. Secondly, this proposed ordinance redefines how the vehicle operator determines if a property is open for vehicle use. Frequently, posting signs on property resulted in destruction or vandalism of the signs and then vehicles were accessing the properties. To thwart sign destruction and provide a disincentive to the vehicle operators from operating on unpaved property, a vehicle owner must determine if a property is open. For public lands, vehicle operators may find the status of land use in an order from a government land management agency, a current map approved by such agency, or from a government land management virtual posting. For private property, the vehicle operator must be able to demonstrate that the property owner has granted permission to access the property.

This proposed ordinance is anticipated to have limited adverse economic impacts but will provide benefits for property owners, because they will be less likely to have to spend money to repair damage to their property from vehicle activity. The landowners will see a savings because of the decrease in the destruction, vandalism, and the necessary replacement of property signs as well as less disturbance/damage to the property. The additional government inspection and judicial costs will be offset by a reduction in burdens on community health care due to the decrease in particulate matter emissions into the air. This decreased burden of community health

care costs helps offset increased agency costs and are expressed as avoided cases of PM₁₀-related health effects.

The only economic impact will be from revenue generated from violators of the proposed ordinance who will receive a monetary fine through the civil penalty structure. The civil penalty structure included in the proposed ordinance is designed to be similar to other existing MCAQD ordinances, which could be either or both a fine or a judge ordering the person to perform at least eight but not more than 24-hours of a community restitution course related to the off-road operation of motor vehicles.

PM₁₀ Reductions And Health Impacts Of The Ordinance:

Maricopa County estimates that off-road recreational vehicles traveling on unpaved surfaces produce 2,159 tons of PM₁₀ annually in the PM₁₀ nonattainment area (MCAQD, 2007). This represents approximately 2.6% of all PM₁₀ emissions in the nonattainment area. Proposed P-28 will reduce emissions in two ways: (1) by prohibiting or limiting trespass trips on unstable surfaces, this results in less material that can become “re-entrained” by vehicles driving over the debris, causing the debris to become airborne PM₁₀ emissions; and (2) by prohibiting or limiting vehicle use on unpaved property, there is less PM₁₀ disturbed areas on the lots to produce emissions. Reductions of PM₁₀ emissions will help to improve public health, as recent literature shows that exposure to elevated PM₁₀ levels can cause increased occurrences of asthma and limit circulation functions (Lin et. al., 2002; Gent et. al., 2003).

Public Comment And Participation:

As mentioned earlier, the MCAQD held three public workshops (August 27, 2007, September 26, 2007, and October 18, 2007) to solicit stakeholder comments on the proposed ordinance. The main categories in which public comment and discussion were focused included: (1) definition of a road or highway; (2) how the vehicle user obtains permission for vehicle access on property; and (3) exemptions from the ordinance.

Regarding category (1), Stakeholders expressed the following concerns: clarify where designated and open trails fall, address service roads, and address private roads. In response to those concerns, the MCAQD reviewed state statutes, the Code of Federal Regulations, and the Maricopa County Zoning Ordinance and consulted with a group of public and trust Land

Managers and developed the following language to supplement the definition of road or highway that the MCAQD initially proposed: “For the purposes of this definition the term “road or highway” also includes designated or opened trail systems, service roads regardless of surface composition, and any other property dedicated or otherwise reserved for public or private street uses, as evidenced by a recorded document, or having thereon a public easement for such use.”

Regarding category (2), proposed P-28 provides the vehicle operator several options to become informed of land use. The vehicle operator can look for a sign on the property posting the land open. The vehicle operator can look for an order, map, or virtual posting from a government land management agency or can obtain written permission from a private land owner. The vehicle operator will also have access to a forthcoming website about land availability for vehicle use. The responsibility for this website, data sharing, access and maintenance requirements still need to be defined.

Regarding category (3), the MCAQD has included an exemption from the proposed ordinance (restricting the operation of any vehicle on unpaved property) for operations directed by utilities for operations, distribution, and transmission systems. Utilities use vehicles on unpaved property to perform maintenance and inspections of utility lines/systems. Oftentimes, permission or proof of authority to access such unpaved property is granted via an implied or expressed easement; written permission from the property owner is not always available. Consequently, utilities are exempt from proposed P-28.

After addressing these comments and after following the rulemaking process, the MCAQD believes that proposed P-28 is ready for approval and adoption by the Board Of Supervisors.

References:

Lin, M., Chen, Y., Burnett, R. T., Villeneuve, P. J., & Krewski, D. (2002). The influence of ambient coarse particulate matter on asthma hospitalization in children: Case-crossover and time-series analyses. *Environmental health perspectives*, 110(6), 575-581.

Maricopa County Air Quality Department (MCAQD). (2007). 2005 Periodic Emissions Inventory for PM₁₀ for the Maricopa County, Arizona, Nonattainment Area

MARICOPA COUNTY
P- 28 OFF ROAD VEHICLE USE IN UNINCORPORATED
AREAS OF MARICOPA COUNTY

SECTION 1 – GENERAL

- A. PURPOSE
- B. APPLICABILITY

SECTION 2 – DEFINITIONS

- A. DESIGNATED OR OPENED TRAIL SYSTEM
- B. ROAD OR HIGHWAY
- C. VEHICLE

SECTION 3 - RESTRICTIONS

SECTION 4 – VIOLATIONS, NOTICES, AND PENALTIES

SECTION 5 - EXEMPTION

MARICOPA COUNTY
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SECTION 1 - GENERAL

- A. PURPOSE:** This Ordinance restricts the operation of any vehicle on unpaved property.
- B. APPLICABILITY:** This Ordinance applies to the operation of any vehicle in unincorporated sections within Maricopa County.

SECTION 2 - DEFINITIONS: For the purpose of this Ordinance, the following definitions shall apply:

- A. DESIGNATED OR OPENED TRAIL SYSTEM -** Roads or routes that are part of a system of trails and that are designated or opened by a government land management agency by order, sign, and/or map approved by such agency.
- B. ROAD OR HIGHWAY -** The entire width between the boundary lines of every way publicly maintained by the federal government, a city, a town or a county if any part of the way is generally open to the use of the public for purposes of vehicular travel. For purposes of this ordinance, the term “road or highway” also includes designated or opened trail systems, service roads regardless of surface composition, and any other property dedicated or otherwise reserved for public or private street uses, as evidenced by a recorded document, or having thereon a public easement for such use.
- C. VEHICLE -** A self propelled device and its appurtenances, excluding devices moved by human power or used exclusively on stationary rails or tracks.

SECTION 3 – RESTRICTIONS:

- A.** A person shall not access unpaved public property with any vehicle within the unincorporated areas of Maricopa County without lawful authority. Lawful authority shall consist of rules, regulations, or orders of a federal agency, this state, a county or municipality which shall be made available to the public by any one of the following:
 - 1. A sign to designate the property is/as open. Such sign shall be in compliance with the standard travel management signing protocol used by Southwest Land Management Agencies and shall at a minimum be conspicuously placed at all points of vehicular access and contain the following information: “Travel Must Remain On Designated Routes”. Copies of the standard travel management signing protocol are available for review at the Maricopa County Air Quality Department, 1001 North Central Avenue, Phoenix, AZ, 85004
 - 2. Through orders of a government land management agency.
 - 3. Through most current maps approved by such government land management agency.
 - 4. Virtual posting from a government land management agency.
- B.** A person shall not operate any vehicle on unpaved private property within the unincorporated areas of Maricopa County without the consent of the lawful owner. Consent of the lawful owner consists of either or both of the following:
 - 1. A sign to designate the property is/as open. Such sign shall be in compliance with the standard travel management signing protocol used by Southwest Land Management Agencies and shall at a minimum be conspicuously placed at all points of vehicular

access and contain the following information: "Travel Must Remain On Designated Routes". Copies of the standard travel management signing protocol are available for review at the Maricopa County Air Quality Department, 1001 North Central Avenue, Phoenix, AZ, 85004

2. Prior written permission which contains the following:
 - (a) The name, address, and telephone number of the person granting permission for the use of the property;
 - (b) A description of the interest the person granting permission has in the property (i.e., property owner, lessee, or agent);
 - (c) If the person granting permission is not the owner of the property, the written permission shall also contain the name, address, and telephone number of the property owner;
 - (d) Specify the period of time for which permission for the use of the property is being granted; and
 - (e) The signature of the person granting permission for the use of the property.
- C. Whenever any person is stopped by an Enforcement Officer for a violation of Section (3) of this Ordinance, he/she shall, upon the request of the Enforcement Officer identify or present the lawful authority required in this section.

SECTION 4 - VIOLATIONS, NOTICES, AND PENALTIES:

- A. A person who violates this Ordinance is guilty of a class 3 misdemeanor.
- B. In addition to or in lieu of a fine pursuant to this section, a judge may order the person to perform at least eight but not more than twenty-four hours of a community restitution course related to the off-highway operation of motor vehicles.
- C. For violations of this Ordinance, the Enforcement Officer shall use a uniform traffic ticket and complaint prescribed by the rules of procedure in civil traffic cases adopted by the Supreme Court. The Enforcement Officer may issue a citation to persons in violation of this Ordinance.

SECTION 5 - EXEMPTION:

- A. This Ordinance shall not apply during a period of emergency or if the operation is directed by a peace officer or other public authority.
- B. The property owner, person entitled to immediate possession of the property, or invitee who has lawful authority may operate such vehicles on the property if such use does not violate any other applicable laws.
- C. For the purposes of this ordinance, unpaved public or unpaved private property does not include roads or highways.
- D. This Ordinance shall not apply to operations directed by utilities for operation, distribution, and transmission systems provided that both of the following conditions are met:
 1. Operations are performed in a / using a marked company vehicle; and

2. If operations are performed in a / using a personal vehicle, then identification of the company shall be visible and readable by the public without having to be asked by the public (e.g., included/posted in a sign that is visible on the vehicle or included/posted in a sign that is visible in the window of the vehicle).